REMARKS

Claims 1, 2, 9-11, 16, and 18-20, as amended, remain herein. Claims 3-8 and 12-15 have been withdrawn. Claim 17 has been cancelled without prejudice. Claim 1 has been amended. Support for the amendment can be found throughout the specification (see, e.g., page 9, lines 24-25 of the specification, and original claim 17).

Claims 1, 2, 9-11, and 16-20 were rejected under 35 U.S.C. §103(a) over Hosokawa et al. U.S. Patent 6,379,824.[1]

Applicants' claim 1 recites an organic luminescence device including an insulating or semiconductive inorganic thin film layer having an energy gap of 2.7 eV or more and an ionization energy of more than 5.6 eV, and an organic compound layer including an ortho-metallized metal complex.

Hosokawa does not teach or suggest an organic luminescence device including an insulating or semiconductive inorganic thin film layer having an energy gap of 2.7 eV or more and an ionization energy of more than 5.6 eV, and an organic compound layer including an ortho-metallized metal complex.

There is no disclosure in Hosokawa of an insulating or semiconductive inorganic thin film layer having an ionization energy of more than 5.6 eV. In addition, there is no disclosure in Hosokawa of an organic compound layer including an ortho-metallized metal complex. Thus, Hosokawa does not disclose all elements of applicants' claims.

[1] The Office Action cites Hosokawa et al. U.S. Patent Application Publication 2006/0049410 as the basis for this rejection. This, however, is the publication of the present application and does not qualify as prior art. A call to the Examiner on September 5, 2007 clarified that the basis for this rejection is not Hosokawa U.S. Patent Application Publication 2006/0049410, but Hosokawa U.S. Patent 6,379,824.

The Office Action does not establish a prima facie case of obviousness, which requires three basic criteria. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The initial burden is on the PTO to provide some suggestion of the desirability of doing what the inventor has done. "To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." Ex parte Clapp, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985). See MPEP 706.02(j).

The Office Action conclusorily states that it would have been obvious to one of ordinary skill in the art to include an organic compound layer including an ortho-metallized metal complex. The PTO presented no evidence that the use of ortho-metallized metal complex in combination with the claimed inorganic thin layer were known at the time the application was filed. In fact, applicants' specification explains that the use of tris(2-phenylpyridine)iridium complex directly joined to an anode or cathode requires a high voltage which leads to large power consumption, generation of heat, and short lifespan of the device (see page 2, lines 14-21 of the specification). Furthermore, even when an inorganic layer was used, the prior art devices showed lower efficiency (see page 3, lines 4-7 of the specification).

The presently claimed invention solves this problem by combining an organic compound layer including an ortho-metallized metal complex and an inorganic thin layer having an energy

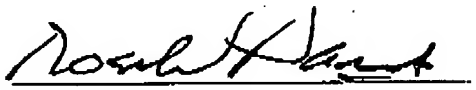
gap of 2.7 eV or more and an ionization energy of more than 5.6 eV. The organic compound layer uses light emission from triplet-state excitons in combination with a specific inorganic thin layer to achieve a high luminance, a high luminescence efficiency, and an improved life-span (see page 3, lines 12-15 of the specification). The energy gap of 2.7 eV or more prevents electrons from passing through the organic compound layer to reach the inorganic thin film layer (see page 3, lines 4-7 of the specification (stating that with an energy gap of 2.6 eV or less the inorganic layer has no electron barrier property); see also Table 1 at page 49 of the specification (showing that a device using amorphous SiC, which has an energy gap of 2.0 eV, exhibits a poor lifespan)). In addition, because the ionization energy of the inorganic thin layer is more than 5.6 eV, it is closer to the ionization energy of the organic compound layer thereby making it easier for holes to be injected from the inorganic thin film layer to the organic compound layer and thereby enhancing luminous efficiency (see Tables 1 and 3 at pages 49 and 58 of the specification showing the improvement in device lifespan with the use of In-Zn-Ce-O (ionization energy 5.98 eV), In-Zn-Tb-O (ionization energy 5.75 eV), and Ce-O (ionization energy 5.65 eV) compared to Sn-Ru-O (ionization energy 4.9 eV) and Si-In-V-O (ionization energy 5.4 eV)).

Thus, Hosokawa does not disclose all elements of applicants' claimed invention, and discloses nothing that would have suggested applicants' claimed invention to one of ordinary skill in the art. Furthermore, there is no disclosure or teaching in Hosokawa, or otherwise in this record that would have suggested the desirability of modifying any portions thereof effectively to anticipate or suggest applicants' presently claimed invention. For all the foregoing reasons, applicants respectfully request reconsideration and withdrawal of this rejection.

For the foregoing reasons, all claims 1, 2, 9-11, 16 and 18-20 are now fully in condition for allowance, which is respectfully requested. The PTO is hereby authorized to charge or credit any necessary fees to Deposit Account No. 19-4293. Should the Examiner deem that any further amendments would be desirable in placing this application in even better condition for issue, he is invited to telephone applicants' undersigned representative.

Respectfully submitted,

Date: October 1, 2007



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